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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/764,573	01/27/2004	Wu-Han Yang	3319-0120P	9020

2292 7590 04/20/2007  
BIRCH STEWART KOLASCH & BIRCH  
PO BOX 747  
FALLS CHURCH, VA 22040-0747

EXAMINER
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HA, DAC V

ART UNIT	PAPER NUMBER
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2611

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	04/20/2007	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 04/20/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/764,573	<b>Applicant(s)</b> YANG, WU-HAN	
	<b>Examiner</b> Dac V. Ha	<b>Art Unit</b> 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-9 is/are rejected.
- 7) ☒ Claim(s) 3 and 10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Claim Objections*

1. Claims 2-4, 10 are objected to because of the following informalities:

Claim 2, line 4, the recitation "SAN" should be clearly defined when first recited to avoid antecedent problem.

Similarly, the recitation "R1" and "R2" should be defined (i.e. domain) in claim 3.

Similarly for recitation "the master parameter" in line 11 of claim 10.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1, 2, 4-9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin (US 7,200,133) in view of Bruckert et al. (US 5,809,020) (hereafter Bruckert).

**Regarding claim 1**, Lin discloses:

"a master processing unit for assigning an appropriate number of rake receivers for receiving said transmitted signals" (Fig. 2, element 200; col. 3, lines 49-50) (note: the controller 200 needs not to be part of element 110);

"a plurality of rake receivers for receiving said transmitted signal and outputting a recovered signal through a recovery process" (Fig. 2, element 152; col. 5, line 40 to col. 6, line 21);

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“a detecting unit for receiving said transmitted signal and outputting a detection signal;

wherein said master processing estimates said appropriate number according to the qualities of said detection signals and integrates said recovered signals into a compound signal” (Fig. 2, elements 110, 120, 130, 150, 170, 200; col. 5, line 40 to col. 6, line 21; col. 7, lines 65-67).

Lin differs from the claimed invention in that Lin doesn't disclose “a plurality of processing units”. Bruckert, in the same field of endeavor, discloses such claimed subject matter in Fig. 1, elements 126, 154; col. 4, lines 43, 53. Therefore, it would have been obvious to one skilled in the art at the time of the invention to incorporate such teaching from Bruckert into Lin to further facilitate diversity concept, as such, to more accurately demodulate received signal (i.e. in multipath environment).

**Regarding claim 2**, the claimed subject matter “a distributor for receiving said detection signals from said processing units, and estimating said appropriate number SAN; a master combiner connected with said distributor and said plurality of processing units, the master combiner receiving said recovered signals of said rake receivers and combining said recovered signals into said compound signal” would have been easily realized by one skilled in the art as implementation specific, based on concept from Lin and Bruckert.

**Regarding claims 4, 5, 6**, similar analogy to that of claim 2 applied.

**Regarding claim 7**, see claim 1 above; and Lin, whole document. Further, even though the combination of Lin and Bruckert does not specifically disclose “determining

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whether the total number of rake receivers with every current processing units is enough according to said signature acknowledge number", based on the concept disclosed by Lin and Bruckert, one skilled in the art would have easily realized that, in order to efficiently utilize the number of rake (finger), there must be such a determination so that appropriate rake (finger) could be assigned for receiving the multi-path signals.

**Regarding claims 8, 9, similar analogy to that of claim 2 applied.**

***Allowable Subject Matter***

4. **Claims 3, 10** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ito (US 6,408,039) discloses Radio Communication Apparatus Employing A Rake Receiver.

Tirola et al. (US 6,529,545) discloses Rake Receiver.

Kaewell, Jr. et al. (US 7,092,432) discloses Node B/Base Station Rake Receiver Pooling.

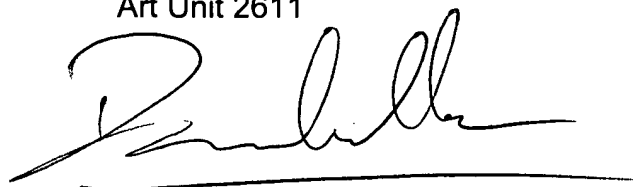
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dac V. Ha whose telephone number is 571-272-3040. The examiner can normally be reached on 5/4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Dac V. Ha  
Primary Examiner  
Art Unit 2611

A handwritten signature in black ink, appearing to read 'Dac V. Ha', is written over a horizontal line.